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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,489	10/23/2001	Abdul Malik	0152.00420	3233

7590 07/21/2003

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EXAMINER
THERKORN, ERNEST G

ART UNIT	PAPER NUMBER
1723	15

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-3

Office Action Summary	Application No.	Applicant(s)	
	10/001,489	MALIK, ABDUL	
	Examin r	Art Unit	
	Ernest G. Therkorn	1723	

-- The MAILING DATE of this communication app ars on the cov r sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) *12-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Newly submitted claims 12-19, directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-11, drawn to a method of preconcentrating analytes, classified in class 210, subclass 635.

II. Claims 12-15, drawn to a microextraction device, classified in class 210, subclass 198.2.

III. Claims 16-19, drawn to a method of forming a microextraction device, classified in class 210, subclass 656.

The inventions are distinct, each from the other because:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as claimed could be used to practice another and materially different process. For example, the apparatus could be used as a chemical reactor or a biochemical reactor in a chemical or biochemical reaction process.

Inventions I and III are not related because they are drawn to different methods with different purposes and different steps.

Inventions II and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the

process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed could be made by another and materially different process. For example, the hollow capillary could be formed in situ around the sol gel extraction medium.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 12-19 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) in view of Chong (Anal. Chem. 1997, 69, 3889-3898) and either Wang (Anal. Chem. 1997, 69, 4566-4576) or Malik

(Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54). At best, the claims differ from Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) in reciting use of sol gel. Chong (Anal. Chem. 1997, 69, 3889-3898) discloses sol gel chemistry allows low costs, has the unique ability to achieve molecular uniformity, and has a strong adhesion of the coating to the substrate. Wang (Anal. Chem. 1997, 69, 4566-4576) (Abstract) discloses that sol gel coated columns provide efficient separation for analytes from a wide polarity range and because of direct chemical bonding to fused silica substrates sol-gel coatings possess significantly higher thermal stability than conventional coatings. Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) discloses the advanced features of sol-gel chemistry can be effectively applied in an open column and chemical bonding of the coating or the monolithic bed to the column walls provides enhanced operational stability to the sol-gel columns. It would have been obvious to use sol gel in Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) because Chong (Anal. Chem. 1997, 69, 3889-3898) discloses sol gel chemistry allows low costs, has the unique ability to achieve molecular uniformity, and has a strong adhesion of the coating to the substrate and either because Wang (Anal. Chem. 1997, 69, 4566-4576) (Abstract) discloses that sol gel coated columns provide efficient separation for analytes from a wide polarity range and because of direct chemical bonding to fused silica substrates sol-gel coatings possess significantly higher thermal stability than conventional coatings or because Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) discloses the advanced features

of sol-gel chemistry can be effectively applied in an open column and chemical bonding of the coating or the monolithic bed to the column walls provides enhanced operational stability to the sol-gel columns.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) in view of Chong (Anal. Chem. 1997, 69, 3889-3898) and either Wang (Anal. Chem. 1997, 69, 4566-4576) or Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) as applied to claims 1-11 above, and further in view of either Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) or Nakanishi (U.S. Patent No. 5,624,875). At best, the claim differs from Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) in view of Chong (Anal. Chem. 1997, 69, 3889-3898) and either Wang (Anal. Chem. 1997, 69, 4566-4576) or Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) in reciting use of a monolith. Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) discloses that open tubular columns and monolithic columns are interchangeable alternatives to apply the advanced features of sol gel chemistry. Nakanishi (U.S. Patent No. 5,624,875) (column 4, lines 25-27 and column 6, lines 39-46) discloses that sol gel monolithic columns have very low flow resistance. It would have been obvious to use a monolith in Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) in view of Chong (Anal. Chem. 1997, 69, 3889-3898) and either Wang (Anal. Chem. 1997, 69, 4566-4576) or Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) either because Malik (Advanced

Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) discloses that open tubular columns and monolithic columns are interchangeable alternatives to apply the advanced features of sol gel chemistry or because Nakanishi (U.S. Patent No. 5,624,875) (column 4, lines 25-27 and column 6, lines 39-46) discloses that sol gel monolithic columns have very low flow resistance.

The remarks urge that Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) is directed to physically bonded capillaries. However, this appears to be a mere allegation unsupported by fact. Kataoka (Anal. Chem. October 1, 1999, 71 4237-4244) would appear to be silent on the issue of chemical bonding.

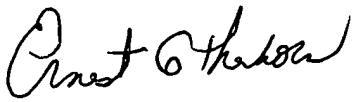
The remarks urge patentability based upon chemical bonding. However, Wang (Anal. Chem. 1997, 69, 4566-4576) (Abstract) discloses because of direct chemical bonding to fused silica substrates sol-gel coatings possess significantly higher thermal stability than conventional coatings. In addition, Malik (Advanced Sol-gel Column Technology for Condensed-phase Microseparations, 1997, page 54) discloses chemical bonding of the coating or the monolithic bed to the column walls provides enhanced operational stability to the sol-gel columns.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (703) 308-0362.



Ernest G. Therkorn
Primary Examiner
Art Unit 1723

EGT/12
July 16, 2003